

Feature-Driven Acquisition of L2 Reciprocals*

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Synopsis: The UG-based L2 acquisition of anaphoric binding within the generative framework has promoted extensive research on the realm of Second Language Acquisition. Notwithstanding the fact that reciprocals are commonly believed to behave the same as reflexives in obeying Chomsky's (1981) definition of Binding Theory (A), reciprocals in L2 have been researched far less than reflexives.

This paper, thus, aims at demonstrating that *Exclusively Selective Transfer Hypothesis*, which has recently been developed and elaborated in Ishino and Ura (2009 a) under the feature-based theory within the Minimalist Program, conforms perfectly to the empirically novel and experimentally firm observation on the syntactic feature transfer from the L1 reciprocal *otagai* to the corresponding lexical item in L2, *each other*, in the course of the L2 acquisition.

Key words: Second Language Acquisition, Binding Theory (A), reciprocals, inter-language, syntactic feature transfer

1. Introduction

The acquisition of anaphoric binding within the generative framework has stimulated and promoted extensive research on the realm of Second Language Acquisition (SLA). Reciprocals, which are commonly believed, just as reflexives, to obey Chomsky's (1981) definition of Binding Theory (A), have been researched far less than reflexives within the UG-based studies on SLA.

The aim of this paper, which is consequent upon this state of the current SLA research, is two-fold: (I) to report the empirically new discovery about the syntactic feature transfer from the reciprocal in L1

*This paper was presented at Doshisha University and Kwansei Gakuin University. I would like to thank the audience at those meetings for comments and judgments. I would like to express my sincere gratitude to Hiroyuki Ura and Kiyomi Kusumoto for valuable comments on the materials presented herein. All remaining errors are my own.

(native language) to the corresponding lexical item in L2 (target language) at the intermediate acquisition stage called inter-language (IL) grammar, and (II) to demonstrate that *Exclusively Selective Transfer Hypothesis*, which has recently been developed and elaborated in Ishino and Ura (2009 a) and will herein be defended under the feature-based theory within the Minimalist Program, conforms perfectly to the new discovery concerning the L2 acquisition of reciprocals.

The argumentation in this paper will be developed in the following manner: (a) First, we will exhibit the result of our experiments, which were conducted for the purpose of figuring out both the binding domain of the Japanese reciprocal *otagai* in L1 grammar of Japanese and that of the reciprocal *each other* in the grammar of the intermediate acquisition stage of Japanese learners of English (JLsE) as a second language. In the literature on Japanese syntax, it is generally assumed that the Japanese reciprocal *otagai* shows the same locality as the English reciprocal *each other* with respect to anaphoric binding. Contrary to this assumption, our experimental results clearly reveal that *otagai* differs from *each other* in the syntactic features that determine its binding domain. It is also revealed that *otagai* shows the same locality as *zibun-zisin*, one of the Japanese complex reflexive forms: It is reported by Ishino and Ura (2009 a) that their experimental studies reveal that *zibun-zisin* cannot be bound from the outside of a tensed clause but can be bound from the outside of a non-tensed clause as well as within any type of clause.

(b) Theoretically, we will defend Ishino and Ura's (2009 a) *Exclusively Selective Transfer Hypothesis* through examining the result of our experiments and elucidate the syntactic mechanism of the L2 acquisition of reciprocals. It will be argued that the inappropriate transfer of the syntactic features of the L1 reciprocal in the IL grammar leads to the misunderstanding of the syntactic behavior of the L2 reciprocal, and it will be shown that only Ishino and Ura's (2009 a) *Exclusively Selective Transfer Hypothesis* can explicate our newly discovered data about the

locality concerning the anaphoric binding of *each other* in the IL grammar.

Section 2 and 3 will review and scrutinize some approaches to L2 binding: *Parameter Resetting Hypothesis* (cf. Hirakawa 1990, and Watanabe et al. 2008), *Transfer Hypothesis* (cf. Yuan 1994, and Benett and Progovac 1998) and *Exclusively Selective Transfer Hypothesis* (cf. Ishino and Ura 2009 a). In section 4 and 5, we will offer an empirically novel and experimentally firm observation on the transfer of the syntactic features from the reciprocal in L1 to the one in L2. We will vindicate *Exclusively Selective Transfer Hypothesis* through exploring the experimental results. Finally, section 6 will conclude the present paper with some discussion on a few remaining issues and on future advancement of this research.

2. Background: UG-based SLA

Since the early 1980s, UG-based SLA researches have concentrated their attention on UG accessibility, asking whether L2 learners have *no access*, *direct access* or *indirect access* to UG. *No Access Hypothesis* is represented by *Fundamental Difference Hypothesis* (cf. Bley-Vroman 1990), the hypothesis which supports the idea that UG survives only as the language-specific L1 grammar and is not available at all in SLA. Under the UG-based SLA studies, it is assumed that L2 learners have the grammatically consistent system as their IL grammar at their intermediate acquisition stage because grammatical errors in the course of acquiring L2 represent rule-governed behaviors, which shows that they are constrained by UG. SLA researches have been targeting their aims not only on the issue as to providing practical improvement in L2 teaching but also on the issue as to shedding light on the grammatical ability of IL.

Given the heretofore well-known fact that IL grammar is constrained by UG, *No Access Hypothesis* has turned out to be inappropriate

ate. SLA researches have shifted their concern from the aforementioned issues to the issue as to theorizing about the role of UG and its interaction with L1 grammar in SLA (i.e., what is called “parameter (re)setting”). The current UG-based SLA researches are curious as to what the initial stage of SLA is; namely, as to whether it is L1 grammar or UG (cf. White 2003).

SLA studies made substantial progress, greatly affected by the Principles and Parameters approach in generative grammar. Under the studies of FLA (First Language Acquisition), children have been considered to have UG innately and its concomitant parameters in LAD (Language Acquisition Device). It has also been assumed that certain set of parameter values determine language-particular properties of each language. Children analyze Primary Linguistic Data (PLD) with the use of UG, and they set the parameter values through positive evidence and successfully establish the core grammar of their L1 without fail. In SLA, on the other hand, an important issue arises as to how L2 learners set the L2 parameter values when the target language (L2) differs from the source language (L1) in a given parameter. Pioneering works on SLA have been greatly affected by the Principles and Parameters approach in generative grammar; however, the current SLA researches are conducted within the framework of Minimalist Program and aims to establishing feature-based acquisition theory.

The previous approaches to L2 binding addressed important issues empirically and theoretically: (A) They have been concerned only with the acquisition of reflexive binding (see Section 3), and they have paid scarce attention to the L2 acquisition of reciprocals. (B) The proponents of the earlier approaches lay their theoretical foundations on the language-particular parameters and have not yet taken into consideration lexical item-particular feature-based analyses. In the next section, let us scrutinize three approaches, all of which have been proposed independently for the purpose of explaining the L2 acquisition of reflexive binding, focusing particularly on the hypothesis recently proposed by

Ishino & Ura (2009 a): *Exclusively Selective Transfer Hypothesis* (henceforth, ESTH).

3. Trend to Feature-based Analysis on L2 acquisition

Earlier studies on SLA with reference to Binding Theory (A) have only taken into consideration the L2 acquisition of reflexives and the parameter (re)setting mechanism of their binding domains in the IL grammar. According to the commonly assumed definition of Binding Theory Condition (cf. Chomsky 1981, 1995), an anaphor must be bound in its local domain, the domain which is called “binding domain”. The binding domain of an anaphor is alleged to be parametrically determined (cf. Wexler and Manzini 1987). In the literature on the L2 acquisition of reflexives, the issue as to whether the parameter value of a reflexive in L1 undergoes resetting in the course of learning L2 (i.e., in the grammar of IL) has been much debated. There have been two predominant hypotheses concerning the parameter value resetting in IL: One is *Parameter Resetting Hypothesis* (see Hirakawa 1990, and Watanabe et al. 2008, among others) and the other is *Transfer Hypothesis* (see Yuan 1994, and Benett and Progovac 1998, among others). Almost all the previous approaches in SLA with reference to Binding Theory (A) have paid attention only to the acquisition of reflexives without any reference to reciprocals, which are expected to behave the same as reflexives with regard to their binding domain (cf. Chomsky 1981). Consequently, this paper, following essentially Ishino and Ura’s (2009 a) theory of L2 binding, aims at shedding new light on the feature-based L2 acquisition on Binding Theory (A) by providing a newly-discovered data concerning the syntactic behaviors of *otagai* in L1 Japanese and *each other* in the IL grammar of JLsE¹.

3. 1. Exclusively Selective Transfer Hypothesis

Under the assumption with ESTH, Ishino and Ura (2009 a) have dem-

onstrated that JLS_E select one of their L1 reflexive forms (i.e., *zibun-zisin*) and transfer its syntactic features (‘parameter values’ in the terminology of the previous approaches) to utilize the L2 reflexive in their IL grammar. They have argued that only ESTH is able to clear out all the problems immanent in the previous parameter-based analyses. Ishino and Ura (2009 a) proposes the theory of ESTH by maintaining that the concept of the language-particular parameter setting must be refined conceptually in accordance with the feature-based differences between the lexical items in L1 and those in L2 within the framework of minimalist syntax. The current work lends support to ESTH with particular focus on the L2 acquisition through syntactic feature transfer of the L1 reciprocal to the corresponding L2 one.

As for the L2 acquisition of reciprocals, ESTH predicts that JLS_E (exclusively) select *otagai* from their L1 lexical items and transfer its syntactic features to those of L2 reciprocal *each other*. Consequently, the syntactic features of *otagai* are realized in L2 reciprocals in the JLS_E’s IL grammar. While on the other hand, the two aforementioned approaches have attempted to explain the syntactic mechanism in the L2 acquisition of reflexives according to the parameter (re)setting analyses. In the next subsections, we will demonstrate that the parameter-(re)setting approaches have serious conceptual disadvantages and that they fail to predict and explain some experimental results.

3. 2. Parameter Resetting Hypothesis

Parameter Resetting Hypothesis (henceforth, PRH) (e.g., Finer and Broselow 1986, Hirakawa 1990, and Watanabe et al. 2008, to mention only a few) lays its theoretical foundation on the hypothesis about Wexler and Manzini’s (1987) Governing Category Parameter (GCP), according to which five types of binding domains are cross-linguistically viable in UG, the core idea of which is depicted in (1).

(1) Governing Category Parameter (Wexler and Manzini 1987:53)

α is a governing category for β if α is the minimal category which contains β and

- a. has a subject, or
- b. has an INFL, or
- c. has a TNS, or
- d. has an indicative TNS, or
- e. has a root TNS

Proponents for PRH within the studies on the L2 acquisition of anaphoric binding for JLsE have taken into consideration only one of the reflexive forms in Japanese; namely, *zibun*, the syntactic property of which corresponds to the (e)-type under the hypothesis assuming GCP. Consequently, they mistakenly purport that the parameter value for the Japanese reflexives counts solely as the (e)-type. Because the English reflexive is of the (a)-type, they have concluded that JLsE set their IL parameter value intermediate between those values; namely, the (c)-type on the basis of the subset relation of GCP. Proponents of PRH, thus, argue that JLsE adopt neither the value of L1 nor that of L2; rather they adopt the parameter values intermediate between those values. Their conceptual disadvantage is that there is neither any theoretical rationale nor even any suggestion as to why JLsE reset their parameter value to (c)-type but not any of the other intermediate parameter values (i.e., (b) or (d) in GCP).

Moreover, if their theory is applied to the L2 acquisition of reciprocals, the parameter value of the English reciprocal in the IL grammar of JLsE is supposed to be of (b)-type (i.e., a minimal category with INFL); for, the L1 reciprocal corresponds to the (c)-type and the L2 one corresponds to the (a)-type. According to PRH, JLsE are obliged to adopt the (b)-type parameter value, which lies between the (a)-type and the (c)-type. Since a non-tensed IP counts as a minimal category with INFL, PRH predicts that the non-tensed IP in the (b)-type languages turns out to be the binding domain; whereby, it leads to the prediction that *each*

other in the IL grammar is always clausebound irrespective of whether it is within a tensed CP or within a non-tensed IP. Contrary to this prediction, our experimental results show that the parameter value for *each other* in the IL grammar is of (c)-type, as will be described later in section 4; whence, a serious defect of PRH emerges.

3. 3. Transfer Hypothesis

The other predominant hypothesis is *Transfer Hypothesis* (henceforth, TH) (Yuan 1994, and Benett and Progovac 1998). They found the theoretical rationale of TH upon Pica's (1987) generalization: Monomorphemic reflexives, such as *zibun* in Japanese, allow long-distance binding, and poly-morphemic reflexives, such as *himself* in English, require local binding. TH presumes that the morphological complexity of the L1 reflexive determines the parameter values on the binding domain for the L2 reflexive in the IL grammar.

Crucially, they fail to distinguish the two types of Japanese complex reflexives, *zibun-zisin* and *kare-zisin*, with the misunderstanding that they have the same parameter value on the locality condition. Conceptual disadvantage of their theory is that their prediction will vary depending on which lexical item is regarded as the L1 reflexive. Moreover, their analysis cannot be applied to the English reciprocal *each other*, which morphologically consists of two free morphemes; accordingly, it cannot be analyzed as simple or complex.

ESTH does not have the aforementioned conceptual disadvantages of the existing theories of L2 acquisition. Not only does ESTH have a conceptual advantage over any other parameter-(re)setting approach, but ESTH is also given empirical support by the following experimental results. Now let us turn our attention, in the next section, to the syntactic behaviors of the Japanese reciprocal and the IL reciprocal observed in our experiments.

4. 1. Subjects

4. 2. Procedure of the experiments

4.2.1. Co-referential judgment

Before setting about the experiments, we beforehand explained how to answer to each test sentence. The subjects of our experiments were asked to identify the antecedent of a given reciprocal in order to figure out the binding domains of *otagai* and *each other*. They were first given the example as in (2).

(2) *Joe and Meg* think that *Tom and Bill* hate each other.
NP 1 NP 2

A. NP 2 (Tom and Bill)

B. either NP 1 (Joe and Meg) or NP 2 (Tom and Bill)

“LC” and “LD” are the abbreviations of “local binding” and “long-distance binding”, respectively, in the sense clarified in footnote³. With the employment of these terminologies, we have classified the binding properties of the L1 and L2 reciprocals that were revealed by our experiments.

4.2.2. Grammatical judgment

The subjects of our experiments were asked to determine whether a given sentence is grammatical or not. The subjects who regarded the given sentence as grammatical allowed split antecedents. It should be noted here, that the English reciprocal *each other* actually disallows

4. 4. Results and Data Analysis

4. 4. 1. Group Results

Table 1 and Table 2 below represent the overall responses reported in this experiment. 66.4% of the subjects correctly identified the local antecedent of a given English reciprocal in the embedded tensed clause (see LC in (3)). 33.6% of them erroneously allowed LD in the embedded tensed clause (see LD in (3)), whereas 51.4 to 54.2% of the subjects erroneously allowed LD in the embedded non-tensed clauses, as in (4) and (5). Let us turn our attention to the contrast between the English reciprocal and its Japanese counterpart. 57.9% of the subjects disallowed LD in the embedded tensed clause (see LC in (6)); conversely, 55.1% of them allowed LD in addition to LC in the same context.

Table 1 Results of Co-referential Judgment⁶
LC versus LD for L 1/L 2 reciprocals

<i>n</i> = 107	LC	%	LD	%
(3) English embedded tensed clause	71	66.4	36	33.6
(4) Embedded non-tensed clause (ECM)	49	45.8	58	54.2
(5) Embedded non-tensed clause (overt C)	52	48.6	55	51.4
<i>n</i> = 107	LC		LD	
(6) Japanese embedded tensed clause	62	57.9	45	42.1
(7) Embedded non-tensed clause (Causative)	48	44.9	59	55.1

Table 2 Results of Grammatical Judgment
Acceptability of split antecedents

<i>n</i> = 107	OK	%	Out	%
(8) Split antecedents in English	78	72.9	29	27.1
(9) Split antecedents in Japanese	86	80.4	21	19.6

In Table 2, we see that 80.4% of the subjects allowed split antecedents for the Japanese reciprocal *otagai* and 72.4% of them allowed split antecedents for the English reciprocal *each other* even though (8) is ungrammatical in the L1 grammar of English.

4. 4. 2 Individual Results

Interesting and worth noting though they are, the aggregate data that

we presented in the preceding subsections are insufficient in revealing the transfer of the syntactic behavior of the L1 reciprocal *otagai* to the L2 reciprocal *each other*. Each of the responses of an individual subject should be compared and analyzed much more closely.

In Table 3. 1, the subjects classified in Group A, D, E, and H are expected to transfer the syntactic features of their L1 reciprocal to the L2 one; for, the reciprocal in their IL grammar behaves the same as the L1 reciprocal with respect to the locality of binding domain. As for Group C and G, on the other hand, it is obvious that the subjects do not transfer the syntactic features of their L1 reciprocal.

Table 3. 1 Individual Results of Co-referential Judgment

Group	(7)	Caus.		(4)	ECM	%
A	<i>otagai</i>	LD	→	<i>each other</i>	LD	34.5
B	<i>otagai</i>	LD	→	<i>each other</i>	LC	20.5
C	<i>otagai</i>	LC	→	<i>each other</i>	LD	19.6
D	<i>otagai</i>	LC	→	<i>each other</i>	LC	25.2
	(7)	Caus.		(5)	<i>for-to</i>	%
E	<i>otagai</i>	LD	→	<i>each other</i>	LD	30.8
F	<i>otagai</i>	LD	→	<i>each other</i>	LC	24.2
G	<i>otagai</i>	LC	→	<i>each other</i>	LD	20.5
H	<i>otagai</i>	LC	→	<i>each other</i>	LC	24.2

The point to notice is that Group B and Group F are excluded from our consideration under discussion. This is because we suppose that those who have already acquired the English-type parameter value (i.e., those who have successfully acquired the correct usage of the English reciprocal) ought to be included in Group B and Group F; for, the subjects classified in those groups correctly identified the local antecedent (i.e., LC) in the English embedded non-tensed clauses. The UG-based SLA researches within the generative paradigm should focus on the L2 learner's IL grammar. Because Group B and Group F are alleged to be no longer at an intermediate L2 acquisition stage as for the acquisition of reciprocals, we have concluded that Group B and Group F should be excluded from the consideration under discussion.

Similarly, Group D and H also may include the subjects who might have successfully acquired the L2 parameter value; however, it is equally likely that the subjects who have transferred the syntactic feature of their L1 reciprocal are included in these two groups. Hereby, we do not exclude Group D and Group H from our consideration under discussion.

Table 3. 2 Transfer versus Not transfer

J to E		Transfer (%)	Not transfer (%)
(7) causative	→ (4) ECM	75.2	24.7
(7) causative	→ (5) <i>for-to</i>	72.8	27.1

Table 3. 2 shows that the comparisons of the collected data as to those who have transferred their L1 syntactic feature to the L2 one and those who have not transferred their L1 syntactic feature. As for the IL English reciprocal in the ECM construction, we estimate 75.2% of them (i.e., Group A plus Group D) have transferred their L1 syntactic feature to L2 one, whereas 24.7% of them (i.e., Group C) are expected not to have transferred their L1 syntactic feature to the L2 one. As for the IL English reciprocal in the embedded non-tensed clause with overt C, we estimate that 72.8% of them (i.e., Group E plus Group H) have transferred, whereas 27.1% (i.e., Group G) have not. These figures clearly show that JLE selectively transfer their L1 syntactic feature to the cor-

Table 4. 1 Individual Results of Co-referential Judgment

		(6) finite	(7) Caus.			(3) finite	(4) ECM	%
I	<i>otagai</i>	LC	LD	→	<i>each other</i>	LC	LD	23.4
J	<i>otagai</i>	LC	LD	→	<i>each other</i>	LC	LC	25.5
K	<i>otagai</i>	LC	LC	→	<i>each other</i>	LC	LD	14.8
L	<i>otagai</i>	LC	LC	→	<i>each other</i>	LC	LC	34.0
		(6) finite	(7) Caus.			(3) finite	(5) <i>for-to</i>	%
M	<i>otagai</i>	LC	LD	→	<i>each other</i>	LC	LD	23.4
N	<i>otagai</i>	LC	LD	→	<i>each other</i>	LC	LC	25.5
O	<i>otagai</i>	LC	LC	→	<i>each other</i>	LC	LD	12.7
P	<i>otagai</i>	LC	LC	→	<i>each other</i>	LC	LC	36.1

responding L2 lexical item in their IL grammar.

Next, we confine our attention to the subjects who correctly allowed both LC for their IL reciprocal in the embedded tensed clause and LC for the L1 reciprocal in the embedded tensed clause. Table 4. 1 shows the individual results in which each of the JLsE’s answers for the IL reciprocals with their answers for the L1 reciprocals is under comparison.

Table 4. 2 Transfer versus Not Transfer

J to E		Transfer (%)	Not transfer (%)
(7) causative	→ (4) ECM	79.4	20.5
(7) causative	→ (5) <i>for-to</i>	82.3	17.6

According to Table 4. 2, which shows the comparison between the “transfer” group and the “not transfer” group, we see that far more JLsE have transferred their L1 syntactic feature to the L2 reciprocals.

We have thus claimed that JLsE exclusively select and transfer the syntactic features of *otagai* to the L2 reciprocal. Next, we will provide further evidence in favor of this claim.

Table 5 Individual Results of Grammatical Judgment

<i>n</i> = 107							
Group	(8)	split		(9)	split	%	
Q	<i>otagai</i>	○	→	<i>each other</i>	○	78	72.9
R	<i>otagai</i>	○	→	<i>each other</i>	×	0	0.0
S	<i>otagai</i>	×	→	<i>each other</i>	○	8	7.4
T	<i>otagai</i>	×	→	<i>each other</i>	×	21	19.6

Table 2 indicates that 86 subjects accepted split antecedents in Japanese. ESTH predicts that the syntactic feature of L1 reciprocal is transferred to the L2 reciprocal in the IL grammar. Thanks to our assumption, ESTH predicts that many JLsE erroneously allow split antecedents in English. We conclude that in Table 5, all of those who accepted split antecedents in Japanese have transferred the syntactic features of *otagai* to *each other*, resulting in misunderstanding that *each other* allows split antecedents. It should be noted that none of the JLsE

who accepted split antecedents in Japanese correctly recognized that the English reciprocal does not tolerate split antecedents.

5. Discussion

On the basis of such experimentally obtained data concerning the binding domains of the English and the Japanese reciprocals, we now propose that the two previous approaches that we reviewed in subsection 3. 2. and 3. 3. (i.e., PRH/TH) should be disapproved. Our experimental data, hence, lend support to ESTH, which argues in favor of the transfer of the syntactic features of L1 lexical items.

Now, it is hereby natural to conclude that JLE (exclusively) select and transfer the syntactic features (parameter values) of L1 lexical items to L2 ones in the course of the L2 acquisition process of reciprocals. ESTH is, therefore, highly pertinent to the actual experimental results.

Another piece of newly-discovered evidence in favor of ESTH comes from the data on acceptability of split antecedents, as is shown in Table 2 and Table 5. The Japanese reciprocal *otagai* has the syntactic feature which allows split antecedents, so that we are led to predict with ESTH that JLE transfer its syntactic feature (parameter value) to understand the L2 reciprocal *each other*; as a result, they accept split antecedents for *each other*, which is ungrammatical in the L1 grammar of English. It is clearly shown in Table 2 and Table 5 that this prediction is indeed borne out, as expected.

6. Conclusion

The purpose of this paper was to defend ESTH in SLA and to lend support to it by providing the experimental evidence under the framework of the UG-based SLA. Our observation and its analysis can be recapitulated in the following three points:

(i) Trying out an experiment for the purpose of explicating the binding domain of the Japanese reciprocal *otagai*, we detected that *otagai* only requires the local binding (i.e., LC) in embedded tensed clauses, but allows both of the local and the long-distance binding (i.e., LD) in embedded non-tensed clauses. The empirically novel and experimentally obtained observation on the binding domain and the acceptability of split antecedents for the Japanese reciprocal “*otagai*” have been thus reported in this paper.

(ii) We have empirically confirmed that JLsE initially select the syntactic features of the L1 reciprocal and transfer its syntactic features to the L2 reciprocal in their IL grammar, misunderstanding the English reciprocal within embedded non-tensed clauses as being tolerant both to the local and to the long-distance binding (i.e., LD).

(iii) We defended ESTH, which strongly suggests that the language-particular parameter re-setting approach should be shifted to the syntactic feature-based approach in the studies of the acquisition of binding. Theoretically, this paper thus lends solid support to Ishino & Ura’s (2009 a) ESTH with our empirically new evidence.

The language-particular parameter re-setting approach in the studies of the L2 acquisition of binding should therefore be discarded. The shift from old theories to the Minimalist theory of syntax raises new issues on the parameter re-setting approach in SLA. SLA studies have reached a turning point with an emphasis on the syntactically feature-based approach under the minimalist framework, the issue of which will be left to the future research.

Note

¹ As White (2003) explains, non-native grammars are said to be inter-language grammars in this paper. Though inter-language grammars are alleged to be systematic and represent rule-governed behaviors, they have not been fixed yet and are still transitional in the course of the L2 acquisition.

² As for the example in (2), the answer A (i.e., LC) corresponds to the interpretation under which Joe and Meg think that Tom hates Bill and Bill hates

³ Throughout this paper, “local binding (LC)” is used to refer to the binding dependency between an anaphor and its antecedent, both of which are within a single clause, irrespective of whether the clause is tensed or non-tensed, and “long-distance binding (LD)” is used otherwise. Incidentally, Ishino and Ura (2009 a) has revealed, from their experimental studies, that *zibun* allows LD in any context, whereas *zibun-zisin* disallows LD astride a tensed-clause boundary, though allowing LD astride a non-tensed-clause boundary. As for pronoun-*zisin* (= *kare-zisin*, *kanojo-zisin*, or *karera-zisin*), the experiment by Ishino and Ura (2009 a) has revealed that it disallows any LD.

⁵ Another *Grammatical Judgment Test* was carried out as a follow-up experiment for the purpose of confirming the binding domains of the L1 and L2 reciprocals in the IL grammar. 253 JLSsE in the freshman at Kwansei Gakuin University participated in our experiment. Table 6 shows the result in which we see that the L2 reciprocal is regarded as LC in embedded tensed clauses, while it may be regarded as LD in the embedded non-tensed clauses.

- (10) English embedded tensed clause:
*Joe and Meg think that [the man hates *each other*].
- (11) English embedded non-tensed clause (ECM):
*Joe and Meg expect [the man to understand *each other*].
- (12) English embedded non-tensed clause (with overt C):
*Joe and Meg hope for [the man to understand *each other*].
- (13) Japanese embedded tensed clause:

kisushi-ta] to it-ta.

kiss-PAST C say-PAST

'Hanako and Kyoko said that the man kissed *each other*.'

- (14) Japanese embedded non-tensed clause (ECM):

Hanako to Kyoko-wa [Yamada-kyoju-o *otagai-ni* kibishiku] omot-ta.

and -TOP Prof. Yamada-ACC *each other*-DAT strict think-PAST

'Hanako and Kyoko believed Prof.Yamada to be strict to *each other*.'

Table 6 Results of Grammatical Judgment

$n = 253$	Out→ LC (%)	OK→ LD (%)
(10) English Embedded tensed clause	68.4	31.6
(11) Embedded non-tensed clause (ECM)	45.2	54.8
(12) Embedded non-tensed clause (overt C)	45.0	55.0
(13) Japanese embedded tensed clause	79.4	20.6
(14) Embedded non-tensed clause (ECM)	52.6	47.4

⁶ From Table 2, we see that the Japanese reciprocal *otagai* behaves the same as *zibun-zisin*, one of the three reflexives in Japanese, with respect to the locality of their binding dependencies (see Ishino and Ura (2009 b) for the theoretical rationale behind this observation).

⁷ Throughout this paper, we address ourselves exclusively to the L2 acquisition of the syntactic properties of the reciprocals; ignoring the L2 acquisition of their phonological, morphological, or semantic aspects.

References

- Aikawa, T. 2002. Reflexives. In N. Tsujimura (ed.), *The handbook of Japanese linguistics*, 154–90. Blackwell.
- Bennett, S, and L. Progovac. 1998. Morphological status of reflexives in second language acquisition. In S. Flynn, G. Martohardjono and W. O’Neil (eds.), *The generative study of second language acquisition*, 187–214. Lawrence Erlbaum Associates.
- Berwick, R. 1985. *The acquisition of syntactic knowledge*. Cambridge, Mass.: MIT Press.
- Bley-Vroman, R. 1990. The logical problem of foreign language learning. *Linguistic Analysis*, 20: 3–49.
- Chomsky, N. 1981. *Lectures on government and binding*. Foris.
- Chomsky, N. 1995. *The minimalist program*. MIT Press.
- Eubank, L. 1994. Optionality and the initial state in L2 development. In T. Hoekstra and B. D. Schwartz (eds.), *Language acquisition studies in generative grammar*. 369–88.
- Hawkins, R. 2001. *Second language syntax: A generative introduction*. Blackwell.
- Hirakawa, M. 1989. The governing category parameter in second language acquisition. In Y. Otsu (eds.), *MITA Working Papers in Psycholinguistics* 2: 27–40.
- Hirakawa, M. 1990. A study of the L2 acquisition of English reflexives. *Second Language Research* 6. 1: 60–85.
- Hoji, H. 2006. *Otagai*. In A. Ueyama (ed.), *Theoretical and empirical studies of*

reference and anaphora: Toward the establishment of generative grammar as an empirical science. 126–38.

- Ishino, N. 2009. Syntactic feature transfer hypothesis in SLA: With special reference to reciprocals. Talk presented at the 4th annual meeting of The Kansai Regional Branch of The English Literary Society of Japan, held at Doshisha University.
- Ishino, N. and H. Ura 2009 a. Exclusively Selective Transfer Hypothesis in L2 acquisition and multiple parameters for Japanese reflexives. Talk presented at the 139th biannual meeting of the Linguistic Society of Japan, held at Kobe University.
- Ishino, N. and H. Ura 2009 b. Japanese binding and its neoteric parameter. Ms., Kwansei Gakuin University.
- Katada, F. 1991. The LF representation of anaphors. *Linguistic Inquiry* 22. 2: 287–314.
- MacLaughlin, D. 1995. Universal Grammar and L2 acquisition of reflexive binding: Some learners acquire a non-L1/non-target system. Paper presented at the Annual Meeting of the Second Language Research Forum (Ithaca, NY).
- MacLaughlin, D. 1998. The acquisition of the Morphosyntax of English reflexives by non-native speakers. In Maria-Luise Beck (eds.), *Morphology and its interfaces in second language knowledge*, 195–226: John Benjamins.
- Mihara, K., and K. Hiraiwa (三原健一・平岩健). 2006. 『新日本語の統語構造』松柏社.
- Pica, P. 1987. On the nature of the reflexivization cycle. *North Eastern Linguistic Society* 17: 483–99.
- Reinhart, T., and E. Reuland. 1993. *Reflexivity*. *Linguistic Inquiry* 24: 657–720.
- Pollard, Carl, and Ivan A. Sag. 1992. Anaphors in English and the scope of binding theory. *Linguistic Inquiry* 23. 2: 261–303.
- Selinker, L. 1972. *Interlanguage*. *International review of applied linguistics* 10: 209–31.
- Shirahata, T., and M. Bannai (白畑知彦・坂内昌徳). 2006. 『第二言語習得研究入門』新曜社.
- Thomas, M. 1995. Acquisition of the Japanese reflexive *zibun* and movement of anaphors in logical form. *Second Language Research* 11. 3: 206–34.
- Wakabayashi, S. 1996. The nature of interlanguage: SLA of English reflexives. *Second Language Research* 12. 3: 266–303.
- Watanabe, E., C. Fuji, Y. Kabuto, and K. Murasugi. 2008. Experimental evidence for the parameter resetting hypothesis: The second language acquisition of English reflexive-binding by Japanese speakers. *Nanzan Linguistics: special issue* 3:263–83.
- Wexler, K, and M. Manzini 1987. Parameters and learnability in binding theory.

- In T. Roeper and E. Williams (eds.), *Parameter setting*, 41–76. Reidel.
- White, L. 2003. *Second language acquisition and universal grammar*. Cambridge University Press.
- Yuan, B. 1994. Second language acquisition of reflexives revisited. *Language* 70: 539–45.
- Yusa, N. 1998. A minimalist approach to second language acquisition. In S. Flynn, G. Martohardjono and W. O’Neil (eds.), *The generative study of second language acquisition*, 215–38. Lawrence Erlbaum Associates.